After Sales Technical Documentation

THA–4S
TROUBLE SHOOTING GUIDE

Original, 12/95

NMP Part No. 0275180

AMENDMENT RECORD SHEET

Amendment Number	Date	Inserted By	Comments

TROUBLESHOOTING GUIDE

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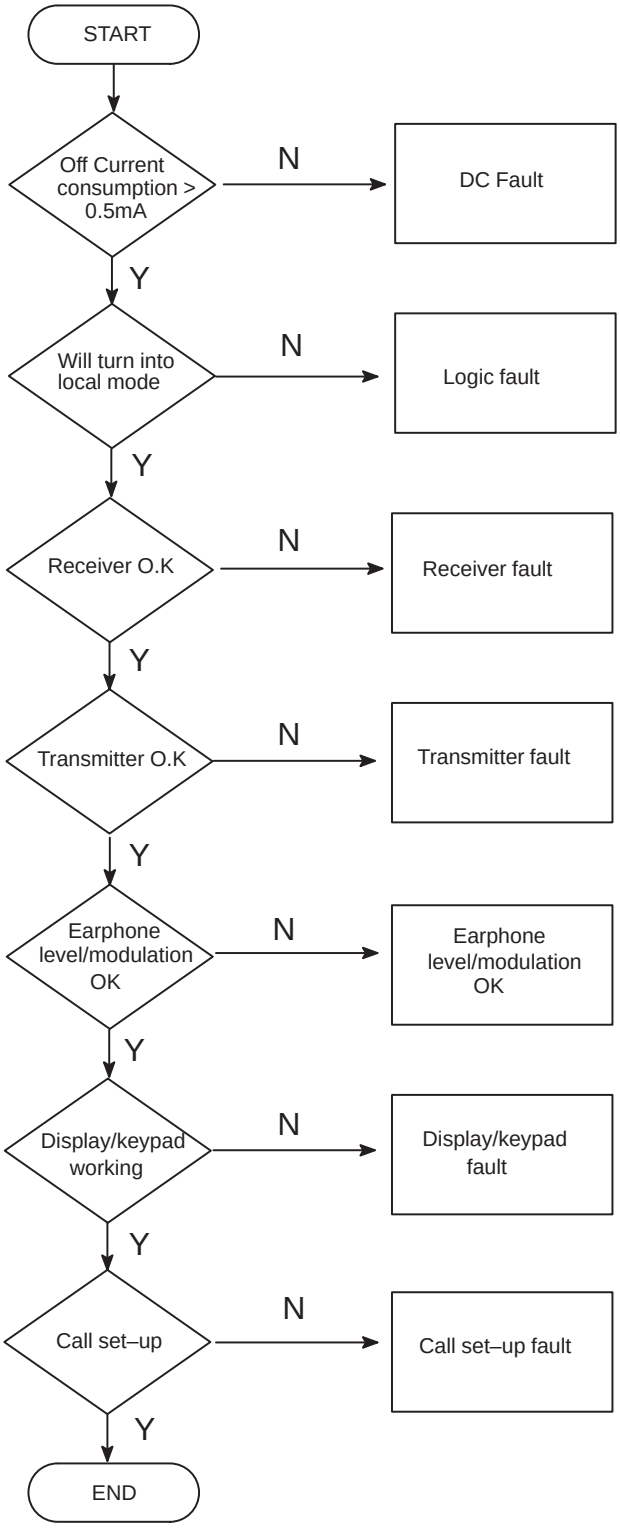
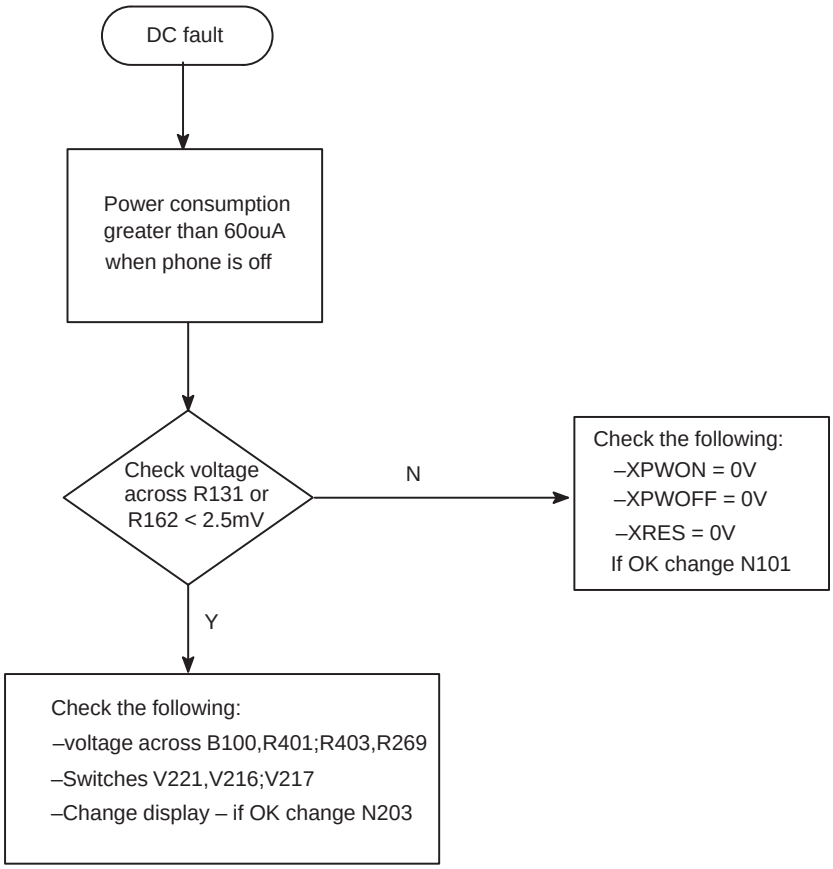
Introduction

The following pages in this guide contain useful flow charts designed to assist with system faultfinding.

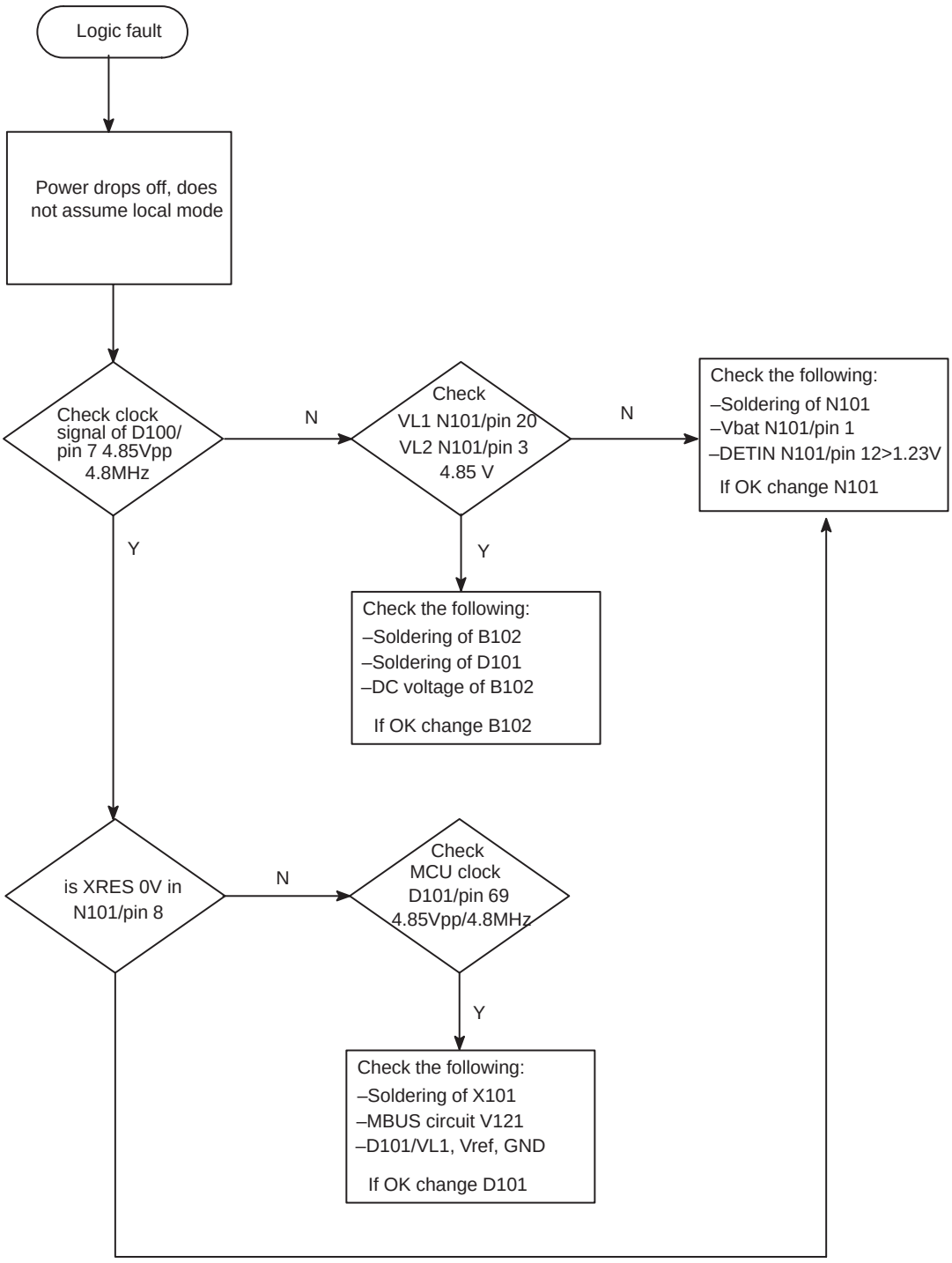
General Faults



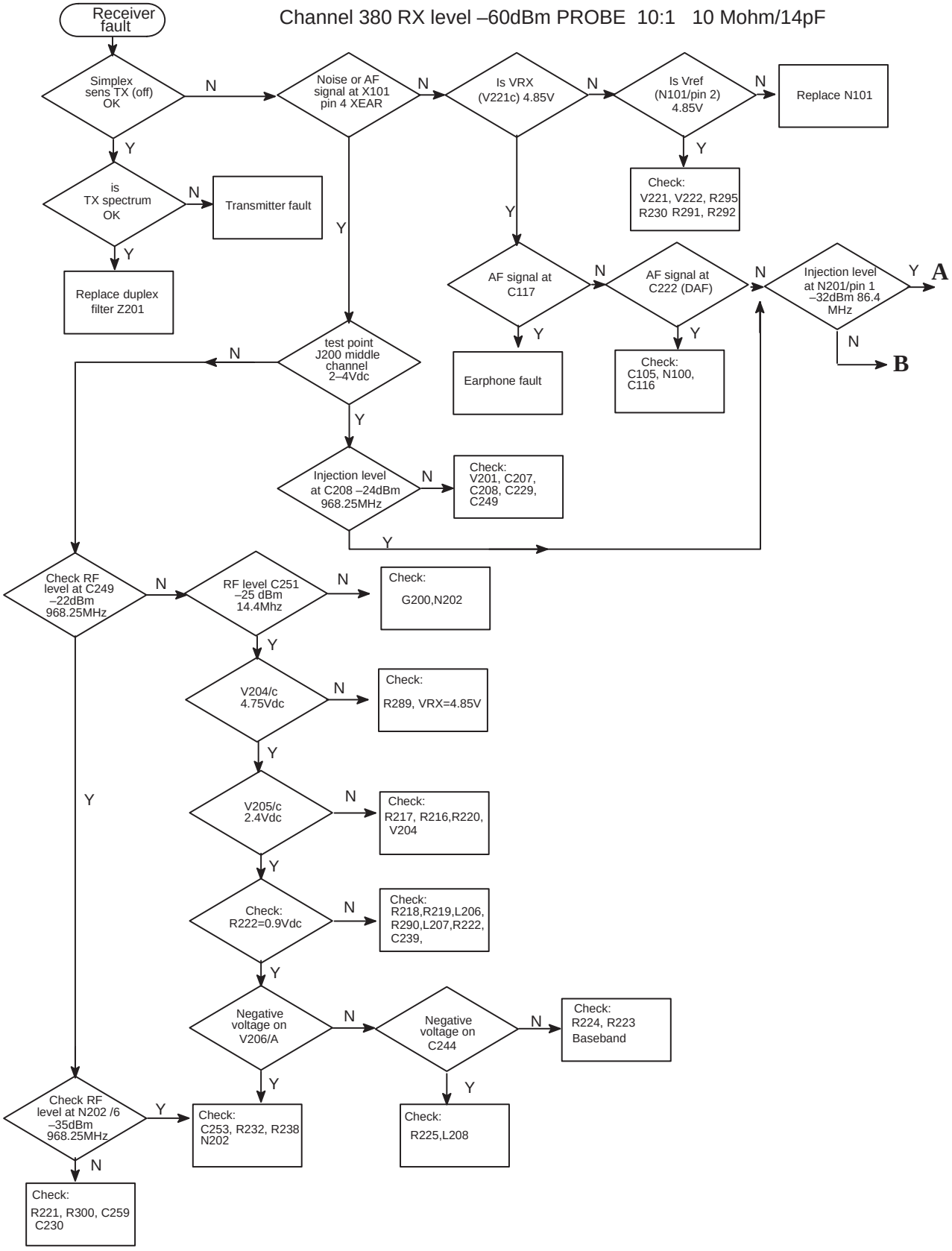
DC Fault


DC fault
Power consumption greater than 60ouA when phone is off
Check voltage across R131 or R162 < 2.5mV
N
Check the following:
–XPWON = 0V
–XPWOFF = 0V
–XRES = 0V
If OK change N101
Y
Check the following:
–voltage across B100,R401;R403,R269
–Switches V221,V216;V217
–Change display – if OK change N203

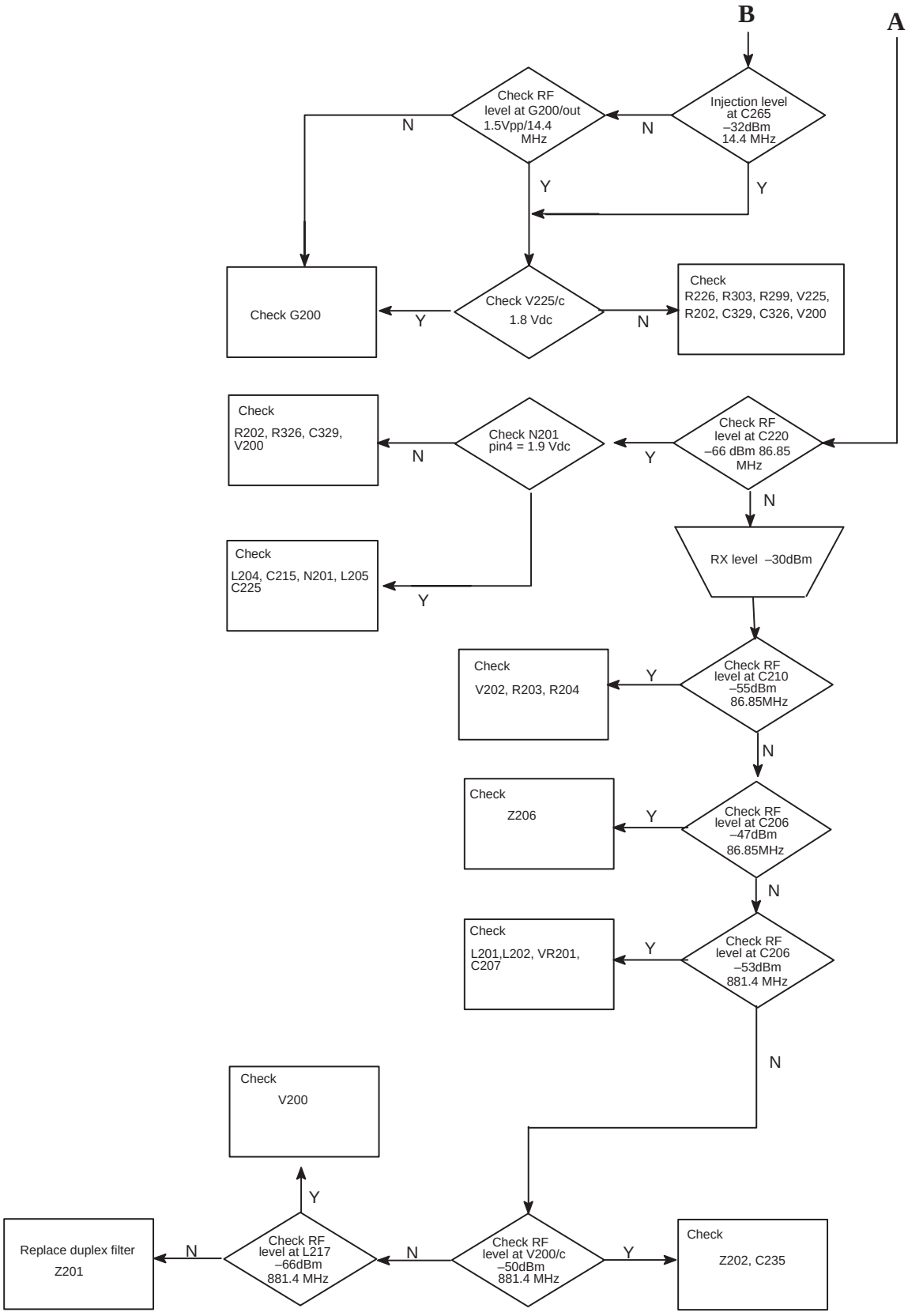
Logic Fault


Logic fault
Power drops off, does not assume local mode
Check clock signal of D100/ pin 7 4.85Vpp 4.8MHz
N
Check VL1 N101/pin 20 VL2 N101/pin 3 4.85 V
N
Check the following:
–Soldering of N101
–Vbat N101/pin 1
–DETIN N101/pin 12>1.23V
If OK change N101
Y
Y
Check the following:
–Soldering of B102
–Soldering of D101
–DC voltage of B102
If OK change B102
is XRES 0V in N101/pin 8
N
Check MCU clock D101/pin 69 4.85Vpp/4.8MHz
Y
Check the following:
–Soldering of X101
–MBUS circuit V121
–D101/VL1, Vref, GND
If OK change D101

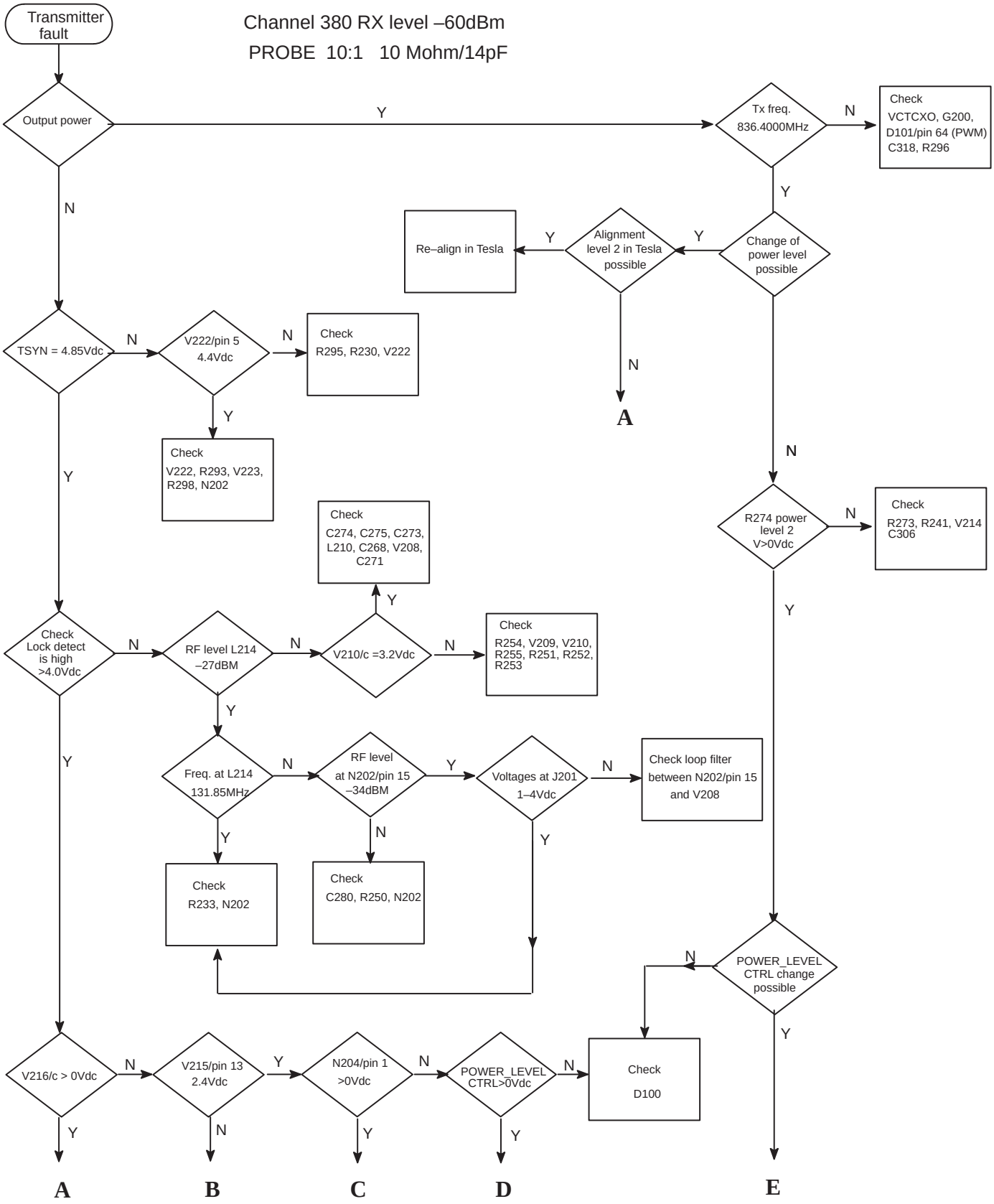
Receiver Fault (1)


Receiver fault
Channel 380 RX level –60dBm PROBE 10:1 10 Mohm/14pF
Simplex sens TX (off) OK
Noise or AF signal at X101 pin 4 XEAR
Is VRX (V221c) 4.85V
Is Vref (N101/pin 2) 4.85V
Replace N101
Check: V221, V222, R295 R230 R291, R292
is TX spectrum OK
Transmitter fault
Replace duplex filter Z201
AF signal at C117
AF signal at C222 (DAF)
Injection level at N201/pin 1 –32dBm 86.4 MHz
A
B
Earphone fault
Check: C105, N100, C116
test point J200 middle channel 2–4Vdc
Injection level at C208 –24dBm 968.25MHz
Check: V201, C207, C208, C229, C249
Check RF level at C249 –22dBm 968.25MHz
RF level C251 –25 dBm 14.4Mhz
Check: G200,N202
V204/c 4.75Vdc
Check: R289, VRX=4.85V
V205/c 2.4Vdc
Check: R217, R216,R220, V204
Check: R222=0.9Vdc
Check: R218,R219,L206, R290,L207,R222, C239,
Negative voltage on V206/A
Negative voltage on C244
Check: R224, R223 Baseband
Check RF level at N202 /6 –35dBm 968.25MHz
Check: C253, R232, R238 N202
Check: R225,L208
Check: R221, R300, C259 C230

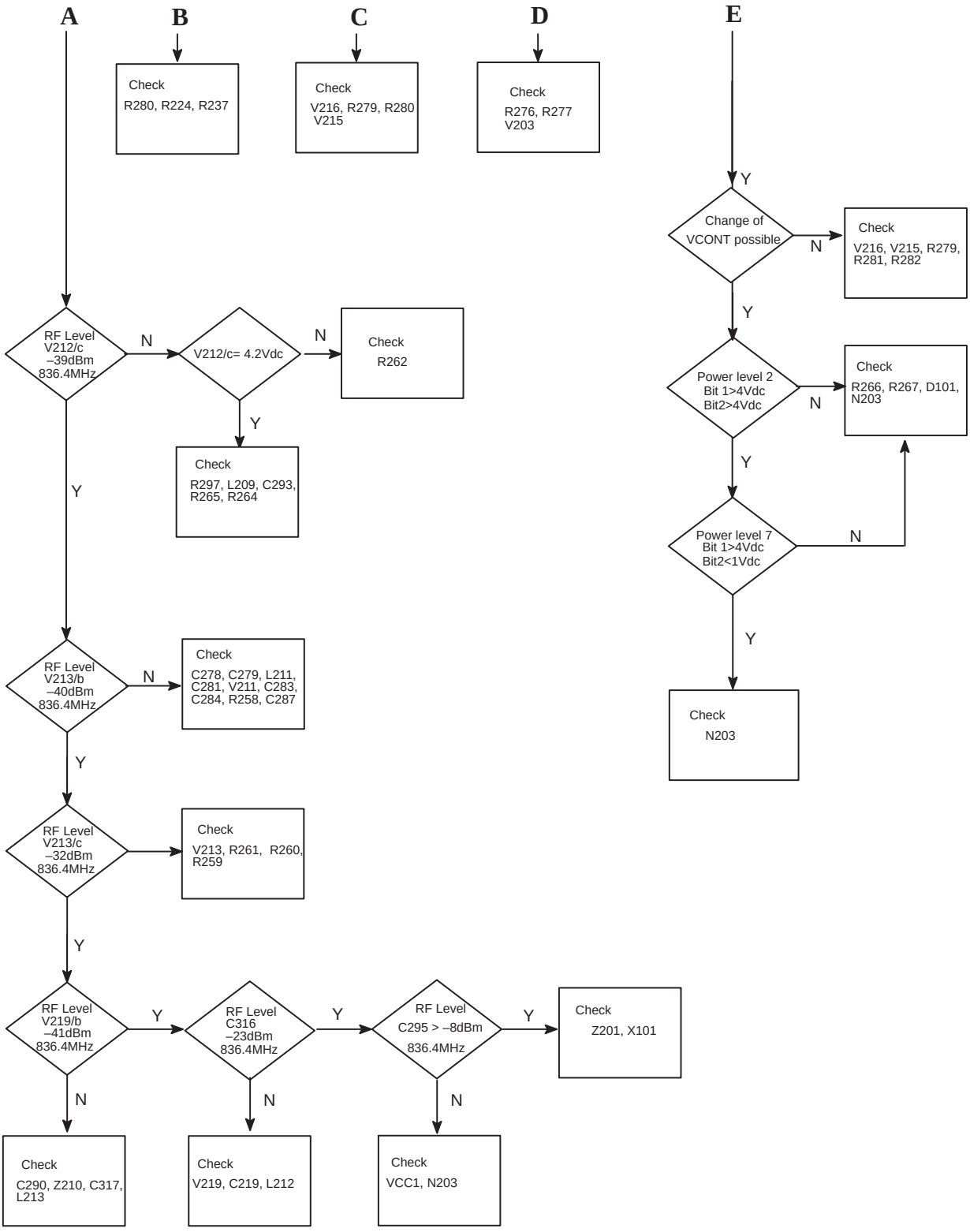
Receiver Fault (2)



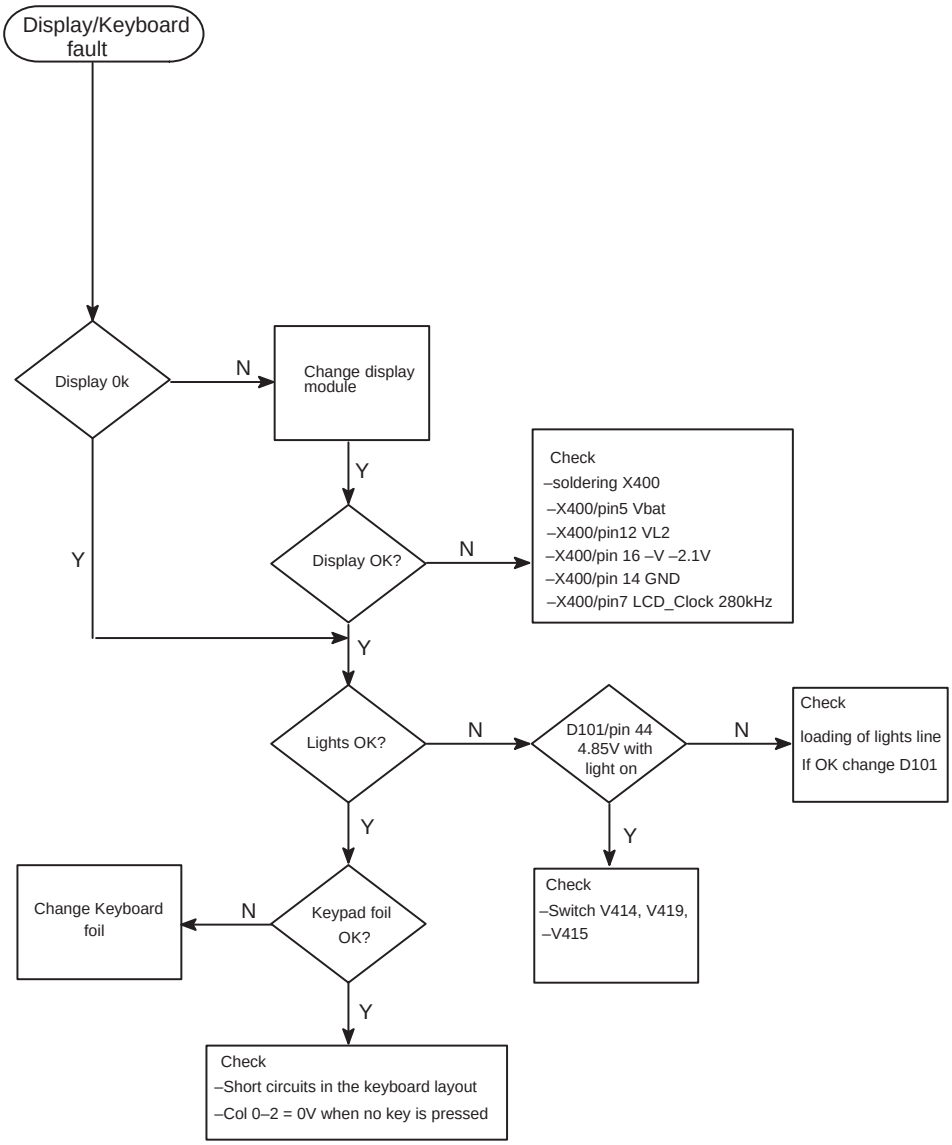
Transmitter Fault (1)



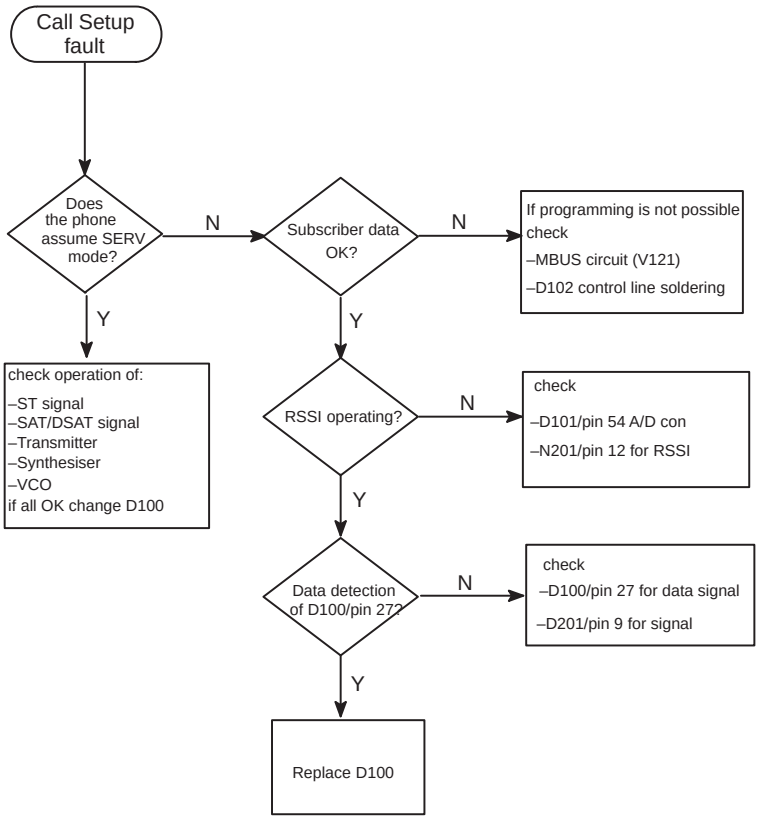
Transmitter Fault (2)



Display / Keyboard Fault



Call Setup Fault



Earphone /Modulation Level Fault

–Voice modulation 2,9kHz div. @ 1kHz
–Volume 3 (in NANTIC vil. step 8.)
–Compandor on
–XMIC line 65mV/!kHz equals
2,9kHz div.